



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
BONNEVILLE LOCK AND DAM PROJECT
PO BOX 150
CASCADE LOCKS OR 97014-0150

Operations Division

APR 25 2014

Dr. Richard Zabel
Fish Ecology Division
Northwest Fisheries Science Center
National Marine Fisheries Service
2725 Montlake Blvd. East
Seattle, Washington 98112
(206) 860-5619

Dear Dr. Zabel:

This is in response to your April 10, 2014 letter requesting approval for access to Bonneville Dam (BON) fishways and the Fingerling Experimental Research Lab (FERL) to continue your evaluation and maintenance of lamprey passage structures. Your activities include the following components:

1. Experimental wetted wall structure testing in the FERL and Cascades Island auxiliary water supply (AWS).
 - a. Utilize a raceway and supplied water in the FERL facility for testing three flow treatments and options for crest structure of a wetted wall climbing structure for lamprey. Volitional climbing tests will be conducted using a circular track structure design for 2 weeks during June on up to 20 fish collected by trap in the Cascades Island AWS and intended for release upstream of Bonneville Dam. Trials will be conducted during both day and night hours and fish allows to attempt to navigate the climbing wall circuit for no more than 2 hours. We will monitor passage success and the number of attempts made by each fish. No anesthetic use will be necessary for these tests.
 - b. Given successful testing in the FERL, we will install a wetted wall structure in the Cascades Island AWS with a terminal trap. The climbing wall will terminate just below the water line given access limitations. Fish collected in this effort will be enumerated and treated like those collected in other traps within the Cascades Island AWS.

Use of the FERL is contingent on whether funding exists for restoring power and water to select or all raceways and can be feasibly completed by project maintenance staff. Be advised that the FERL was designed for experimentation on juvenile fish, not lamprey, and maybe not be suitable for lamprey research. Please

review your WA State permit for lamprey trapping; you are only authorized to trap lamprey at the AFF. **Installation of a wetted wall structure in Cascades Island is not approved.** Efforts are underway to prevent lamprey from entering the dead-end AWS area. Any proposed installation location of a wetted wall structure must be fully vetted through BON Project Biologists, FFDRWG, and FPOM.

2. Modify the Bradford Island lamprey passage structure (LPS) exit section pipe to facilitate cleaning and inspection. A hinge mechanism will be added to the exit pipe section to allow in-season access to the exit slide and counting mechanisms.

Any modifications to USACE owned and operated LPSs (Bradford Island and WA Shore AWS) should be fully coordinated and approved with Project and District Biologists before proceeding.

3. Modify LPS exit counters at Bonneville Dam for improved sensitivity and precision. At all LPS structures, install new waterproof switches and an improved flapper design that avoids previous issues with double-counting fish due to bounce. Communication networks will be configured for transmitting count data. We will provide quality control and test an alternative counting approach using a Smith-Root impedance counter at the Washington-shore LPS. Additional LPS count validation by video will be coordinated with USACE personnel.

Any modifications to USACE owned and operated LPSs (Bradford Island and WA Shore AWS) should be fully coordinated and approved with Project and District Biologists before proceeding.

4. Design and build tanks for temporary holding of lamprey for tribal or research purposes. Facilities for holding lamprey pending distribution to appropriate locations for tribal and research purposes are limited. We will design and install tanks for temporary holding of lamprey prior to their distribution to meet tribal needs.

There is currently no need for additional holding tanks for lamprey at BON.
This activity is not approved.

5. Replace the lead large picket in the Bradford Island fishway separating the fishway from the auxiliary water supply (AWS) channel to make picket spacing $\frac{3}{4}$ ". This change will put the final section in keeping with the other sections at Bradford Island which were replaced previously.

With respect to the activities outlined above and accompanying italicized caveats, your request to access BON for evaluation and maintenance of lamprey passage structures is generally approved.

No work may begin until all necessary permits, or an explanation as to why permits are not required, are on file with the Mr. Andrew Traylor and Ms. Tammy Mackey.


Prior to beginning work, please arrange a meeting with Mr. Traylor, 541-374-4020. You will need to provide a Project impact statement, activity hazard analysis, copies of permits, and a personnel list. Please send electronic copies of these documents to Mr. Traylor, Andrew.W.Traylor@usace.army.mil and to Ms. Mackey, tammy.m.mackey@usace.army.mil.

Please remain in contact with Mr. Traylor throughout your time at the dam. There are many researchers and contractors working at the dam, please work to ensure good communication and cooperation between agencies and organizations.

A copy of this letter has been posted to NWP 2014 Access Responses found at: [http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/NWP %20Research /2014%20NWP%20Access/](http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/NWP%20Research/2014%20NWP%20Access/).

If you have questions regarding this correspondence, please contact Mr. Traylor via e-mail or by phone, at 541-374-4020.

Sincerely,


Jerry A. Carroll
Operations Project Manager
Bonneville Lock and Dam

CENWP STAFFING SHEET

RTAO: Andrew Traylor, CENWP-OD-B

DATE: 23 April 2014

SUBJECT: Approval letter for Dr. Richard Zabel – Northwest Fisheries Centers

DESIRED ACTION: Requires OPM Signature

RETURN TO: Andrew Traylor or call 541-374-4020 if there are questions.

MFR: Please send a copy of the scanned, signed letter to Tammy.m.mackey@usace.army.mil and CC Andrew.w.traylor@usace.army.mil.

| REMARKS: | <i>Name of author</i> | CENWP-OD-B |
|----------|-----------------------------------------------------------|---------------------------------------------------------------------------|
| | Non-concur/concur Concur AWT 4/16/14 | Project Fisheries CENWP-OD-B <i>Traylor, Andy</i> |
| | Non-Concur/Concur Concur NAZ 4/23/14 JGR 4/16/14 | NWP Fish Passage PM-E <i>Zorich, Nathan</i> <i>Rerecich, Jon</i> |
| | Non-concur/concur Concur TMM 4/23/14 | NWP Fish Section CENWP-OD-TF <i>Mackey, Tammy</i> |
| | Non-Concur/Concur | Operations Manager CENWP-OD-B <i>Carroll, Jerry</i> |
| | Scan and file | Admin CENWP-OD-B <i>Kiyokawa, Nancy</i> |